

CLAIMS:

1. A method of producing a winding for a high voltage transformer including the steps of:
  - forming a predetermined number of spaced conductor winding groups
  - 5 joined to form a single winding of the transformer,
  - winding each spaced winding group as a solenoid-type winding from a predetermined number of turns of conductor.
2. A method according to claim 1 further including the step of selecting the number of spaced winding groups and number of turns of each winding group
- 10 such that a predetermined voltage stress for a given operating voltage of the transformer is not exceeded.
3. A method according to claim 1 or 2 wherein the winding is formed from high temperature superconductors.
4. A method according to any one of the preceding claims including the step
- 15 of forming each winding group from a single uninterrupted length of conductor.
5. A method according to any one of the preceding claims wherein each conductor turn includes a plurality of conductors.
6. A method according to any one of the preceding claims wherein the winding groups are spaced and stacked vertically.
- 20 7. A method according to claim 6 including the step of winding each winding group in sequence vertically.
8. A winding for high voltage transformer having a predetermined number of spaced winding groups joined to form a single winding of the transformer, each spaced winding group being solenoid wound from a predetermined number of
- 25 turns.

9. A winding according to claim 8 wherein the number of spaced winding groups and number of turns of each winding group are selected such that a predetermined voltage stress for a given operating voltage of the transformer is not exceeded.
- 5 10. A winding according to claim 8 or 9 wherein the winding uses high temperature superconductors.
11. A winding according to any one of claims of 8 to 10 wherein each winding group is formed from a single uninterrupted length of conductor.
12. A winding according to any one of claims 8 to 11 wherein each conductor
- 10 turn includes a plurality of conductors.
13. A winding according to any one of claims 8 to 12 wherein the winding groups are spaced and stacked vertically.
14. A winding according to claim 13 wherein each winding group is wound in sequence vertically.
- 15 15. A transformer including a winding according to any one of claims 8 to 14.
16. A transformer according to claim 15 wherein the transformer is a superconducting transformer.